

Annual Report of the University Building Official

2010-2011



Introduction

The University of Virginia Building Official is charged with the administration of the Virginia Uniform Statewide Building Code as part of the Management Agreement between U.Va. and the Commonwealth of Virginia pursuant to the Restructured Higher Education Financial and Administrative Operations Act of 2005. Elaine B. Gall, P.E. has served as the University Building Official since February 2009 and oversees the associated responsibilities for administration of Virginia's building codes. To ensure new structures and renovations meet code requirements and U.Va. standards, duties include review of plans, processing of building permits, inspections, and issuance of Certificates of Occupancy. Mrs. Gall and her staff report directly and solely to the Board of Visitors as described in the management agreement with the Commonwealth of Virginia.

Overview

We are in the midst of the largest construction campaign in U.Va. history. As such, the Office of University Building Official (OUBO) has been challenged by a large volume of work. Plans review workload increased by a remarkable 41%, going from 355 last year to 503 this year. The office also issued 174 building permits. At the same time we continued to perform the many inspections and on-site consultations necessary for opening new structures and reoccupying existing structures after renovations. OUBO staff performed the inspections and acceptance testing necessary to issue Certificates of Occupancy for a number of new buildings, the most significant of which include:

- Emily Couric Clinical Cancer Center
- Claude Moore Medical Education Building
- Bavaro Hall
- ITC Data Center
- South Lawn Completion

While staying active in the review and enforcement of the Virginia Uniform Statewide Building Code, OUBO Staff has made progress on other projects as well. We recently released a major update to improve the organization and user-friendliness of the Facilities Design Guidelines. These Guidelines include requirements for desired design features for University of Virginia

structures that are above and beyond the minimum standards of building codes. The Guidelines now include requirements that were previously in other locations, such as the Higher Education Capital Outlay Manual. This will provide our clients with a single location in which to find specialized requirements for U.Va. structures. We have also worked with the Office of Emergency Preparedness and the University Police Department to further strengthen security design criteria. Staff is currently working with the University Office of the Architect on an exterior lighting study for future incorporation into the Facilities Design Guidelines.



Figure 1 - Emily Couric Clinical Cancer Center on November 10, 2010 - Project Completed March 2011

Plans Review

The Office of University Building Official reviews all construction plans for compliance with the Virginia Uniform Statewide Building Code. OUBO employees include registered architects and engineers specializing in mechanical, electrical and plumbing systems, fire safety, and structural civil engineering. In addition to the state codes, reviewers also ensure conformance to Federal and State Accessibility Standards and Federal Standards related to licensing of U.Va. health care buildings. OUBO reviewers also seek to ensure that the U.Va. Facilities Design Guidelines and U.Va. procurement regulations have been utilized in the preparation of construction documents.

OUBO staff completed 503 plan reviews for 182 projects in 2010-2011. This reflects a 41% increase in total reviews over last year. Most reviews fall under the following five categories and break down as follows:

<u>Project Category</u>	<u>Projects</u>	<u>Reviews</u>
Academic	82	240
Health System	76	195
U.Va. Wise	3	6
Athletics	4	8
Housing	11	38



Figure 2 - Bavaro Hall - Completed July 2010

By being on grounds, the Office of University Building Official continues to be able provide services not otherwise available. These include:

- U.Va. is our top priority
- Construction schedules, emergency project needs, and funding availability are weighed into our review priorities thus allowing U.Va. to have better control over its own review and construction schedules
- “On-board” reviews are available for small projects
- Staff is available on an immediate and as-needed basis for consultation with designers, project managers, and other construction professionals
- Review Engineers are available to answer questions from U.Va. employees performing renovation and maintenance work.



Figure 3 - Claude Moore Medical Education Building - Completed June 2010

Building Permits

Between April 1, 2010 and March 31, 2011, building permits were issued for 174 projects. Partial permits for demolition, foundations, and structural cores are commonly issued to allow limited work to begin while remaining design work is being completed. The office issued 34 permits for temporary structures such as bleachers and portable stages for special events. The remaining permits divide up as follows:

<u>Project Category</u>	<u>Permits</u>
Academic	84
Health System	41
U.Va. Wise	1
Athletics	6
Housing	8

This year, we have made a concerted effort to ensure all staff members are trained to process building permits. Permits can be submitted to BuildingPermitRequest@virginia.edu where OUBO evaluates, processes, and tracks permits through the many U.Va. personnel signatures needed for issuance. Staff provides some degree of consultation for each permit issued.

In our first full year of utilizing electronic processing for building permits, forms have been slightly modified to improve efficiency of the process. Tracking of permits is now entirely electronic via a SharePoint application developed specifically for our office.



Figure 4 - Hospital Bed Expansion and Lee Street Connective Elements - January 2011

Inspections

Every building and renovation project is inspected to ensure life safety measures are provided and accessibility standards are followed. OUBO encourages clients to involve us as early as possible so that potential issues can be resolved early in the construction process. Staff has also created educational materials and construction inspection checklists available to Construction Managers so that the project team knows what is required before construction inspections begin. Inspections staff utilize their experience and expertise to assist contractors in avoiding common code compliance difficulties that can arise during construction.

Inspections increased this year as a number of projects neared completion. OUBO is participating in project inspections for numerous projects, including the following major project buildings scheduled for completion before the end of 2011:

- Two Alderman Residence Halls
- Alderman Commons Building
- Physical & Life Sciences Building
- Rice Information Technology and Engineering
- Hunter Smith Band Building
- Bookstore Addition
- Garrett Hall Renovation
- Pavilion IX Refurbishments

- Hospital Bed Expansion
- Lee Street Connective Elements

- Multi-purpose Arena at U.Va. College at Wise
- Addition to Smiddy Hall at U.Va. College at Wise



Figure 5 - Garrett Hall Renovation - Occupancy Scheduled July 2011

In accordance with the Restructuring Act, OUBO obtains approval from the State Fire Marshal's Office prior to issuance of a Certificate of Occupancy. Our relationship with that office continues to be strong and the State Fire Marshal's Office will often accept OUBO inspections when their schedule conflicts with ours. This provides U.Va. with a great amount of flexibility in scheduling and minimizes delays in construction.

Certificates of Occupancy

During the 2010-2011 reporting year, 19 Certificates of Occupancy were issued. In addition, the Office of University Building Official issued 50 Certificates for Reoccupancy for major renovations to existing buildings. New buildings and major renovation projects included:

- Emily Couric Clinical Cancer Center
- Claude Moore Medical Education Building
- University Hospital Heart Center Phase I Renovations
- Completion of South Lawn Project
- Bavaro Hall
- ITC Data Center
- Entry to New Cabell Hall
- Wilsdorf MOCVD Lab
- Phase 1 - Newcomb Hall
Renovations
- Mechanical Engineering Rapid
Prototyping Lab
- University Hospital Radiology and
Zero Level Alterations
- University Hospital Emergency Power Upgrade



Figure 6 - Interior of ITC - Completed February 2011



Figure 7 - South Lawn Commons - Completed August 2010

Other Highlights

- OUBO staff is performing plan review for the Battle Building at the request of its future owners, the U.Va. Health System. The City of Charlottesville Building Official has agreed to accept OUBO plan reviews based on previously established rapport between offices and our reputable quality of work. A similar agreement has also been reached with the Giles County Building Official for projects at Mountain Lake.
- OUBO staff also performed inspections for the new Transitional Care Hospital at the request of U.Va. Health System to ensure the building meets University Standards.
- Virginia adopted the 2009 Edition of the Virginia Uniform Statewide Building Code on March 1, 2011. All plan reviewers attended at least 12 hours of state-mandated training in order to maintain their state certifications.
- Communicated with the newly appointed Virginia Tech Building Official on several occasions, sharing information regarding our established program and lessons learned from our experiences.
- Regularly consulted with the Charlottesville Fire Department to ensure access to our buildings are maintained or improved as projects take place on grounds.
- Building Official serves as a Governor-appointed member of the Virginia Fire Services Board.
- OUBO staff members actively participate in a number of U.Va. inter-departmental teams including:
 - Safety Committee
 - HVAC Committee
 - Accessibility Committee
 - Committee on Generators Testing
- OUBO staff members are also actively involved in professional organizations such as the American Institute of Architects and various engineering professional societies to enhance their knowledge through continuing education and association with other professionals.

University Building Official and Review Unit Biographical Information

University Building Official: Elaine B. Gall, PE, Certified Building Official

B.S. in Mechanical Engineering, Virginia Tech

M.E. in Fire Protection Engineering, University of Maryland

Certifications: Building Code Official, Fire Code Official, Fire Protection Inspector, Fire Protection Plan Reviewer, and Mechanical Inspector based on certification tests and attendance of related DHCD Code Academy and Department of Fire Programs Training.

Appointed by Governor in July 2009 to serve on the Virginia Fire Services Board.

Member of the Virginia Building and Code Officials Association, National Fire Prevention Association, and Virginia Fire Services Board Code Committee.

Virginia registered engineer, 25 years professional experience, all of which includes code and plan review and construction inspection experience. Experience includes serving as Deputy State Fire Marshal and Regional Engineer in Roanoke involved with University of Virginia projects and facilities.

Primary responsibility is to administer the Virginia Uniform Statewide Building Code program for all new construction and renovations and to oversee all activities related to maintaining compliance with Codes and the Management Agreement with the Commonwealth of Virginia.

Review Unit Managing Architect: Robert A. Waite Jr., AIA

B.S. in Architecture, University of Virginia

Member of American Institute of Architects

State and International Code Council certified as commercial building plans examiner and residential building inspector.

Senior Project Manager, University of Virginia and James Madison University 1987-2000

Operated private home inspection business 2000 – 2008

Completing 3rd year with the University of Virginia

Virginia registered architect, 31 years professional experience, 2+ years code review experience at University.

Primary responsibility is management of Review Unit, scheduling for project reviews and value management participation, document reviews for contract administration, architectural and ADA accessibility and building code consultation.

Provides building code and accessibility consultation to University employees, design professionals, and contractors.

Performs inspections for accessibility compliance.

Senior Electrical Engineer: Sathish Anabathula, PE

B.S. in Electrical Engineering, Jawaharlal Nehru Technological University, Hyderabad, India

M.S. in Electrical Engineering, Louisiana Tech University

MBA, Louisiana State University Shreveport

Senior Member, International Electrical and Electronics Engineers (IEEE), nominated by Central Virginia chapter and three current senior members in 2010

Member, Illuminating Engineering Society of North America (IES)

State and ICC Certified as Electrical Plans Examiner and Commercial Electrical Inspector.

Current position since January 2010

Registered Professional Engineer in Virginia and Louisiana

Over 7 years of professional electrical engineering design, safety and code compliance experience in higher education/ health care environment.

Primary responsibility is evaluating plans and specifications, provide technical advice at an expert level for electrical engineering, and participate in Certificates of Use and Occupancy inspections. Also serve as in-house consultation for electrical, telephone/data and fire alarm systems, and value management studies.

Additional responsibilities include assisting in editing of University Facilities Design Guidelines and HECOM Manual.

Currently reviewing plans for replacing outdated fire alarm systems in existing buildings.

Senior Fire Protection Engineer: James E. Frater

B.S.E in Mechanical Engineering, Arizona State University

M.B.A, Arizona State University

International Code Council certified as a Certified Building Official, Certified Fire Marshal, Fire Code Official, Fire Plans Examiner, Fire Inspector I & II, and Uniform Building Plans Examiner.

Completed Virginia Code Academy Core Module Training towards achieving State Building Plans Examiner Certification

University of Virginia employee since November 2010

Arizona & Nevada registered fire protection engineer

18 years professional experience, including design, code and plan review, and inspection experience.

Experience includes serving as a Fire Marshal and Fire Protection Engineer and in private practice at a code and fire protection engineering consultancy.

Primary responsibility for plan review and consultation related to fire safety provisions including fire suppression, egress and fire-resistance rated construction.

Senior Mechanical Engineer: Ronald Herfurth, PE

B.S. in Mechanical Engineering, Virginia Tech

Member of American Society of Heating Refrigeration and Air-Conditioning Engineers

State and International Code Council certified as mechanical plans examiner, plumbing plans examiner, commercial mechanical inspector, and commercial plumbing inspector.

Current position since 1991 and completing 23rd year with The University of Virginia

Virginia registered engineer, 31 years of commercial and institutional practice, including 19 years code review experience at the University.

Primary responsibility is review and in-house consultation for plumbing, heating, ventilation and air conditioning, and energy management and conservation, value management studies, editing of University Facilities Design Guidelines, Certificates of Use and Occupancy inspections.

Senior administrative assistant to Review Unit Managing Architect and co-editor of University Facilities Design Guidelines.

Standing member and chairman of interdepartmental Facilities Management HVAC Committee.

Senior Review Architect, Jessica V. Hurley Smith, AIA

B. of Architecture, Virginia Tech

Registered Architect in Virginia

Member of the American Institute of Architects

LEED Accredited Professional

Over 10 years of architectural design and construction management for private and government projects, specializing in K-12 and higher education.

Served the University as a Construction Administration Manager from 2006-2010.

Current responsibilities include review and in house consultation for architectural documents, including code compliance, constructability and accessibility standards.

Provide progress inspections for code compliance and accessibility and inspections for occupancy as required.

Senior Civil/Structural Engineer: Shashi Kavde, PE

B.S. in Civil Engineering, National Institute of Engineering, Mysore, India

M.S. in Structural Engineering: Drexel University, Philadelphia, PA

Registered Professional Engineer in Virginia, North Carolina, and New Jersey

Member of American Society of Civil Engineers, American Concrete Institute and American Institute of Steel Construction

University of Virginia employee since 1996

50 years of civil and structural design and construction management for private and government projects (sports, mass transit, industrial, defense, research, power, petroleum & chemical plants environmental facilities, and institutional/residential buildings), including

14 years at the University reviewing Construction Documents for Building Code Compliance, conformance to University Facility Design Guidelines, sound engineering principals and constructability for all projects.

Additional responsibilities include editing of University Facilities Design Guidelines, HECOM Manual, Value Management Studies, Tracking and processing of Building Permits, Inspections, and inter discipline/departmental coordination.

Expedient inspections and in-house consultation for structural and civil engineering “hot-button” issues for University facilities.

Managing Law School Withers-Brown Building Post-tension floor slabs Acoustic Monitoring System for Tendon failures and replacement of same as & when necessary.